

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method for forming a drill bit body, comprising:

inserting at least one displacement into a mold, wherein the at least one displacement comprises:

a substantially cylindrical body; and

a projection adapted to form a relief groove in the drill bit body;

infiltrating powdered tungsten carbide with a binder alloy in [[a]] the mold, ~~the mold having therein at least one displacement adapted to form a mounting pad for a cutting element, the displacement comprising a substantially cylindrical body having a diameter selected to substantially conform to a radius of the cutting element and a projection adapted to form a relief groove under a position of a diamond table in the cutting element when the cutting element is mounted on the pad, a width of the relief groove selected so that the relief groove extends back from an outer surface of the bit body at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface;~~

heating the powdered tungsten carbide and the binder alloy to the melting point of the binder alloy;

forming, from the inserted displacement, a mounting pad on the drill bit body for a cutting element having a diamond table; and

forming the relief groove in the drill bit body positioned under the diamond table of the cutting element when the cutting element is mounted on the pad, wherein a width of the relief groove is selected so that the relief groove extends back from an outer surface of the drill bit body at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface of the drill bit body, and

wherein the substantially cylindrical body of the displacement has a diameter selected to substantially conform to a radius of the cutting element.

2. (Previously Presented) The method as defined in claim 1 wherein the cutting element comprises a tungsten carbide substrate, the substrate brazed to the mounting pad.
3. (Previously Presented) The method as defined in claim 1 wherein the at least one displacement comprises a castable material formed into a single body.
4. (Previously Presented) The method as defined in claim 1 wherein the projection extends past an external surface of the displacement by about 0.025 inches.

5.-11. (Cancelled)

12. (Currently Amended) A method for forming a drill bit body, comprising:

inserting at least one displacement into a mold, wherein the at least one displacement is a single component comprising:

a substantially cylindrical body; and

a projection adapted to form a relief groove in the drill bit body;

~~infiltrating powdered tungsten carbide with a binder alloy in [[a]] the mold; the mold having therein at least one displacement adapted to form a mounting pad for a cutting element, the displacement being made from a single component comprising a substantially cylindrical body having a diameter selected to substantially conform to a radius of the cutting element and a projection adapted to form a relief groove under a position of a diamond table in the cutting element when the cutting element is mounted on the pad.~~

heating the powdered tungsten carbide and the binder alloy to the melting point of the binder alloy;

forming a mounting pad on the drill bit body for a cutting element having a diamond table; and

forming the relief groove in the drill bit body positioned under the diamond table of the cutting element when the cutting element is mounted on the pad,

wherein the substantially cylindrical body has a diameter selected to substantially conform to a radius of the cutting element.

13. (Previously Presented) The method as defined in claim 12 wherein the relief groove has a depth of about 0.025 inches.

14. (Previously Presented) The method as defined in claim 12 wherein the relief groove extends back from an outer surface of the blade at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface.